What Is Claimed Is:

1   1. An exposure system with group compensation,
2   comprising:
3   a lot classification database to record a group
4   classification of at least one lot wafer;
5   a compensation unit to obtain the group classification of
6   the lot wafer from the lot classification database,
7   retrieve a group compensation value according to the
8   group classification, and compensate at least one
9   overlay parameter according to the group
10   compensation value; and
11   a first exposure device to perform a back-end process
12   including overlay and exposure processes on the lot
13   wafer using the compensated overlay parameters.

1   2. The exposure system with group compensation as
2   claimed in claim 1 further comprising a second exposure device
3   to perform a front-end process on the lot wafer, determine the
4   group classification of the lot wafer, and store the group
5   classification in the lot classification database.

1   3. The exposure system with group compensation as
2   claimed in claim 2 wherein the group classification is
3   determined according to the device and mask used in the front-end
4   process.

1   4. The exposure system with group compensation as
2   claimed in claim 1 wherein the first exposure device further
3   updates the group classification in the lot classification
4   database after the lot wafer undergoes the back-end process.

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1   5.   The exposure system with group compensation as
2 claimed in claim 4 wherein the first exposure device updates the
3 group classification according to the device and mask used
4 therein.

1   6.   An exposure method with group compensation,
2 comprising the steps of:
3   obtaining a group classification of a lot wafer;
4   retrieving a group compensation value according to the
5   group classification;
6   compensating at least one overlay parameter according to
7   the group compensation value; and
8   performing a back-end process including overlay and
9   exposure processes on the lot wafer using the
10   compensated overlay parameters.

1   7.   The exposure method with group compensation as
2 claimed in claim 6 further comprising providing a second
3 exposure device to perform a front-end process on the lot wafer,
4 and determine the group classification of the lot wafer.

1   8.   The exposure method with group compensation as
2 claimed in claim 7 wherein the group classification is
3 determined according to the device and mask used in the front-end
4 process.

1   9.   The exposure method with group compensation as
2 claimed in claim 6 further comprising updating the group
3 classification after the lot wafer undergoes the back-end
4 process.

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1   10.   The exposure method with group compensation as
2   claimed in claim 9 wherein the group classification is updated
3   according to the device and mask used in the back-end process.